

NEW CHROMOSOME NUMBERS IN ZINNIA AND SANVITALIA

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In recent systematic papers concerning *Zinnia* (Torres 1962, 1963) and *Sanvitalia* (Torres 1964) the author was unable to provide chromosome counts for 1 of the 17 species of *Zinnia* and for 3 of the 7 species of *Sanvitalia*. The *Zinnia* species, *Z. purpusii*, had been known only from the state of Chiapas in Mexico. Because the collection site, "Hacienda Monserrate", was not, and still is not, located and because the species was known only from the type collection, it was surprisingly pleasant to find a population on the hillsides of gravelly soil along Mexican Highway 190, 1.6 miles east of the Oaxaca-Chiapas border (1739) and again 12 miles east of the same border (1743). From the first collection the chromosome number of $n = 12$ was determined. Meiosis was regular. Its chromosome number, although predictable, was of interest because its nearest phenetic ally, *Z. maritima*, is also $n = 12$. Yet several other near allies are $n = 11$. The count is significant also since chromosome numbers of all species are now known.

A few more collections of *Sanvitalia tenuis* had been made than of *Z. purpusii* yet its habitat too was relatively inaccessible. It apparently grows only on the eastern side of the Sierra Madre Occidental in western Chihuahua. Some 12 miles west of Miñaca (near Ciudad Guerrero and La Junta) in Chihuahua near the edge of oak-pine hills, I chanced upon a population of some 20-25 young plants just beginning to flower. Interestingly, all my collections were from the base of young oak trees on gentle slopes in gravelly soil. During the rainy season when *S. tenuis* is in flower the area is accessible by logging roads and only in high-center vehicles. An anomalous chromosome number pattern had already been established for *Sanvitalia* because the species are $n = 8$ or 16, except for *S. aberti* which is

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$n = 11$. It therefore became of especial interest to obtain the number of *S. tenuis* to see if it formed a link in a possible aneuploid series or if it was also $n = 8, 16$ or 11 . Its chromosome number is $n = 9$; meiosis appeared regular. Perhaps one of the two species as yet uncounted, Mexican *S. fruticosa* and South American *S. versicolor*, will fill the $n = 10$ gap.

Voucher specimens of both species will be housed at KANU with duplicates at MSC.

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 THEAE). Brittonia. 16: 417-433.

TWO NEW NAIADS FROM ILLINOIS AND DISTRIBUTIONAL RECORDS OF THE NAIADACEAE¹

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In the process of identifying Illinois species of *Naias* and in comparing fresh material with herbarium specimens, it was discovered that considerable misidentifications of specimens of this genus existed in Illinois. In order to present an accurate account of *Naias* in Illinois, and to up-date

¹An additional species *Najas marina* L. is reported from Illinois by Winterringer in this number of Rhodora (p. 221).

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